

What is claimed is:

1. A copy protection method for digital media, the method comprising the steps of:

3 (a) encrypting an original media data set with a media key corresponding to a symmetric algorithm and encrypting said media key with a public key of a compliant playing device;

(b) delivering said media data set and media key encrypted in the step (a) and a media certificate to said playing device, said certificate including a private-key identification of said playing device, said private-key identification being encrypted with said public key;

(c) decrypting said private-key identification;

5 (d) searching for an actual private key by checking whether each of stored private keys of said playing device corresponds to said decrypted private-key identification;

(e) decrypting said delivered media key with said actual private key; and

0 (f) decrypting said delivered media data set with said decrypted media key.

2. The method of claim 1, wherein said stored private keys include a current private key and one or more old private keys,

each of said old private keys being previously revoked through a key revocation process.

3. The method of claim 2, wherein said playing device
5 includes a rewritable memory storing said old private keys.

4. The method of claim 3, wherein said older private keys being stored in said memory are encrypted with said public key.

5. A copy protection system for digital media, the system comprising:

a private key verifier receiving a media certificate that includes a private-key identification of a compliant playing device and searching for an actual private key by checking whether each of available private keys of said playing device corresponds to said private-key identification;

a media key decryptor receiving an encrypted media key and decrypting said media key with said actual private key; and

a media data decryptor receiving an encrypted media
0 data set and decrypting said media data set with said decrypted media key.

6. The system of claim 5, wherein said available private keys include a current private key and one or more old private keys, each of said old private keys being previously revoked through a key revocation process.

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7. The system of claim 6, further comprising a data-rewritable memory storing said one or more old private keys.

8. The system of claim 7, where said older private keys being stored in said memory are encrypted with a public key of said playing device.

9. The system of claim 5, wherein said encrypted media key is encrypted with a public key of said playing device.

10. The system of claim 5, wherein said encrypted media data set is encrypted with an original media key.